```
=> d que 133
L31        1615 SEA FILE=HCAPLUS ABB=ON  PLU=ON  GLUTENINS+OLD/CT
L32          22 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L31(L)MODIF?
L33           3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND (CYS OR CYSTE?)
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looking for modified glutenins

3 cites

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=> d que 137
L1    136 SEA FILE=HCAPLUS ABB=ON  PLU=ON  APPELS R?/AU
L2    166 SEA FILE=HCAPLUS ABB=ON  PLU=ON  MORELL M?/AU
L3    145 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BEKES F?/AU
L4     97 SEA FILE=HCAPLUS ABB=ON  PLU=ON  TAMAS L?/AU
L5    500 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4)
L6      2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND MODIF? PROTEIN
L7     27 SEA FILE=REGISTRY ABB=ON  PLU=ON  (254972-99-1/BI OR 255362-64-
          2/BI OR 255362-65-3/BI OR 255362-66-4/BI OR 255362-67-5/BI OR
          255362-68-6/BI OR 255362-69-7/BI OR 255362-70-0/BI OR 255362-71
          -1/BI OR 255362-72-2/BI OR 255362-73-3/BI OR 255362-74-4/BI OR
          255362-75-5/BI OR 255363-63-4/BI OR 255363-64-5/BI OR 255363-65
          -6/BI OR 255363-66-7/BI OR 255363-67-8/BI OR 255363-68-9/BI OR
          255363-69-0/BI OR 255363-70-3/BI OR 255363-71-4/BI OR 255363-72
          -5/BI OR 255363-73-6/BI OR 255363-74-7/BI OR 255363-75-8/BI OR
          9032-08-0/BI)
L36     1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 AND L7
L37     2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L6 OR L36
```

Inventor search

2 cites of 27 cpds displayed

```
=> d que 138
L8      4 SEA FILE=REGISTRY ABB=ON  PLU=ON  "CYS7CYS236"
L38     1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L8
```

1 citation *Just looking for this fragment in File Reg*

```
=> s 133 or 137 or 138
L39       4 L33 OR L37 OR L38

=> d ibib abs hitstr ind 1-4
```

L39 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:796353 HCAPLUS
DOCUMENT NUMBER: 138:254137
TITLE: Chain Extension and Termination as a Function of
                         Cysteine Content and the Length of the Central
                         Repetitive Domain in Storage Proteins
AUTHOR(S):   Tamas, Laszlo; Gras, Peter W.; Solomon, Robert G.;
                         Morell, Matthew K.; Appels, Rudi; Bekes, Ferenc
CORPORATE SOURCE: CSIRO Plant Ind., Canberra, 2601, Australia
SOURCE: Journal of Cereal Science (2002), 36(3), 313-325
                         CODEN: JCSCDA; ISSN: 0733-5210
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB   Analog glutenin proteins (ANGs) based on the barley seed storage protein
     C-hordein, modified to contain N- and/or C-terminal **cysteine**
     residues and varying lengths of repetitive domain, have been purified from
     a bacterial expression system. The proteins were used to modify the
     mixing, extension and baking properties of wheat flour doughs in
     small-scale tests. Comparison of the effects of simple addn. of the
     proteins vs. their chem. incorporation into the glutenin macropolymer has
     allowed us to assess the importance of **cysteine** content,
     cysteine position and repetitive domain length in detg. dough
     mixing and processing properties. When incorporated, the proteins, along

with small synthetic oligopeptides based on their N- and C-terminal
sequences, change the amt. of large glutenin polymers, and hence dough
properties, in ways consistent with their action as either chain
terminators (polypeptides with single **cysteine** residues) or
chain extenders (polypeptides with two **cysteine** residues, one in
either terminal domain). The gross effects of chain extension and
termination may be further fine-tuned by modification of the mol. size of
the incorporated proteins through alteration of their repetitive domains.
CC   17-11 (Food and Feed Chemistry)
ST   dough rheol modified glutenin
IT   Dough
      Food rheology
         (modified glutenin analogs and effect on wheat dough rheol.)
IT   **Glutenins**
      RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
      (Biological study)
         (**modified; modified** glutenin analogs and effect on
         wheat dough rheol.)
IT   502959-03-7   502959-04-8   502959-05-9   502959-06-0
      RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (chain extender for modification of glutenin analogs and study of
         effect on wheat dough rheol.)
REFERENCE COUNT: 29   THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L39 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:330569 HCAPLUS
DOCUMENT NUMBER: 135:272163
TITLE: Modification of chain termination and chain extension
                          properties by altering the density of **cysteine**
                          residues in a model molecule: Effects on dough quality
AUTHOR(S):   Tamas, L.; Bekes, F.; Gras, P. W.; Morell, M. K.;
                          Appels, R.
CORPORATE SOURCE: CSIRO Plant Industry, Canberra, ACT 2601, Australia
SOURCE: Special Publication - Royal Society of Chemistry
                          (2000), 261(Wheat Gluten), 258-261
                          CODEN: SROCDO; ISSN: 0260-6291
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB   Functional studies on purified proteins were conducted using pilot scale
      testers and micro-baking technol. Elasticity and extensibility data on
      seven engineered polypeptides, different d. of **cysteine**
      residues, were presented and compared. Analog glutenin (ANG) proteins
      with one or two **cysteine** residues at both ends increased mixing
      time (MT) and decreased breakdown in resistance (BDR), suggesting greater
      strength. The functional property of odd nos. of **cysteine**
      residue contg. ANG proteins were studied and the MT of the dough was
      considerably decreased compared to the control dough sample. Polypeptides
      decreased the extensibility, and while increasing the size distribution,
      the loaf height (LH) values also increased. However, ANG contg. odd nos.
      of **cysteine** residue had increased the extensibility and
      decreased the LH. The gluten structure and dough characteristics were
      affected by the no. and distribution of **cysteine** residues within
      storage proteins. The combination of protein engineering and small-scale
      functional studies is a powerful tool for exploring structure/function
      relationships in gluten proteins.
CC   17-11 (Food and Feed Chemistry)
ST   glutenin **cysteine** residue dough
IT   Dough

Food elasticity
(modification of chain termination and chain extension properties by altering d. of **cysteine** residues in a model mol. in relation to dough quality)
IT **Glutenins**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(**modification** of chain termination and chain extension properties by altering d. of **cysteine** residues in a model mol. in relation to dough quality)
IT 52-90-4, **Cysteine**, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(modification of chain termination and chain extension properties by altering d. of **cysteine** residues in a model mol. in relation to dough quality)
REFERENCE COUNT: 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L39 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:825319 HCAPLUS
DOCUMENT NUMBER: 134:115042
TITLE: Basic rheology of bread dough with **modified protein** content and glutenin-to-gliadin ratios
AUTHOR(S):   Uthayakumaran, S.; Newberry, M.; Keentok, M.; Stoddard, F. L.; **Bekes, F.**
CORPORATE SOURCE: Quality Wheat Cooperative Research Centre Ltd., North Ryde, 1670, Australia
SOURCE: Cereal Chemistry (2000), 77(6), 744-749
                         CODEN: CECHAF; ISSN: 0009-0352
PUBLISHER: American Association of Cereal Chemists
DOCUMENT TYPE: Journal
LANGUAGE: English
AB   The uniaxial elongational and shear rheol. of doughs varying in either the protein content or glutenin-to-gliadin ratio were investigated. Increasing the protein content at const. glutenin-to-gliadin ratio increased the strain-hardening properties of the dough, as shown by increasing elongational rupture viscosity and rupture stress. Glutenin and gliadin had a more complex effect on the elongational properties of the dough. Increased levels of glutenin increased the rupture viscosity but lowered the rupture strain, while elevated gliadin levels lowered the rupture viscosity but increased the rupture strain. These observations provide rheol. support for the widely inferred role of gliadin and glutenin in shaping bread dough rheol., namely that gliadin contributes the flow properties, and glutenin contributes the elastic or strength properties. The shear and elongational properties of the doughs were quite different, reflecting the dissimilar natures of these two types of flow. Increasing protein content lowered the max. shear viscosity, while increasing the glutenin-to-gliadin ratio increased max. shear viscosity. Strong correlations between the results of basic and empirical rheol. were found. These basic, or fundamental, rheol. measurements confirmed prior empirical studies and supported baking industry experience, highlighting the potential of basic rheol. for bread and wheat research.
CC   17-11 (Food and Feed Chemistry)
ST   rheol bread dough protein glutenin gliadin
IT   Dough
Food rheology
(bread dough rheol. response to protein content and glutenin-to-gliadin ratio)
IT   Gliadins

Glutenins
Glutens
Proteins, general, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
   (bread dough rheol. response to protein content and glutenin-to-gliadin
   ratio)
REFERENCE COUNT: 32   THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L39 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:53704 HCAPLUS
DOCUMENT NUMBER: 132:103748
TITLE: Glutenin seed storage proteins modified to contain
                          lipid or starch binding domains
INVENTOR(S):   **Appels, Rudi; Morell, Matthew;**
                          Bekes, Frank; Tamas, Laszlo
PATENT ASSIGNEE(S):   Commonwealth Scientific and Industrial Research
                          Organisation, Australia; Goodman Fielder Limited;
                          Groupe Limagrain Pacific Pty. Ltd.
SOURCE: PCT Int. Appl., 77 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

     PATENT NO.   KIND DATE   APPLICATION NO. DATE
     ---------------   ---- --------   --------------- --------
     WO 2000002914   A1   20000120   WO 1999-AU563   19990712
         W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
             DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
             JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
             MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
             TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
             MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
             ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     CA 2337685   AA   20000120   CA 1999-2337685   19990712
     AU 9947630   A1   20000201   AU 1999-47630   19990712
     EP 1127066   A1   20010829   EP 1999-930937   19990712
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     JP 2002520009   T2   20020709   JP 2000-559143   19990712
PRIORITY APPLN. INFO.:   AU 1998-4604   A 19980710
                                              WO 1999-AU563   W 19990712
AB   A modified glutenin or seed-storage protein is modified by adding to the
     protein a domain which confers to the **modified protein**
     the ability to incorporate into gluten or bind a ligand or other macromol.
     Thus, the gene selected to construct vectors for such fusion proteins
     coded for C hordein, a storage protein from barley endosperm and
     characterized by an absence of **cysteine** residues. Lipid-binding
     domains were constructed from (1) barley oleosin, (2) wheat CM16 or CM17
     proteins, or (3) puroindoline A; a starch-binding domain was obtained from
     glucoamylase of Aspergillus niger. The modified fusion proteins were
     expressed in recombinant wheat. Such proteins have uses in the prepn. of
     food products or non-food products.
IT   **254972-99-1DP, modified protein** contg.
     255362-66-4DP, modified protein contg.

255362-68-6DP, modified protein contg.
255362-70-0DP, modified protein contg.
255362-72-2DP, Glutenin CM16 (wheat fragment), modified
protein contg. 255362-73-3DP, Glutenin CM17 (wheat
fragment), modified protein contg.
255362-74-4DP, Puroindoline (wheat isoform A fragment),
modified protein contg.
RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
use, unclassified); PRP (Properties); BIOL (Biological study); PREP
(Preparation); USES (Uses)
   (amino acid sequence; glutenin seed storage proteins modified to
   contain lipid or starch binding domains)
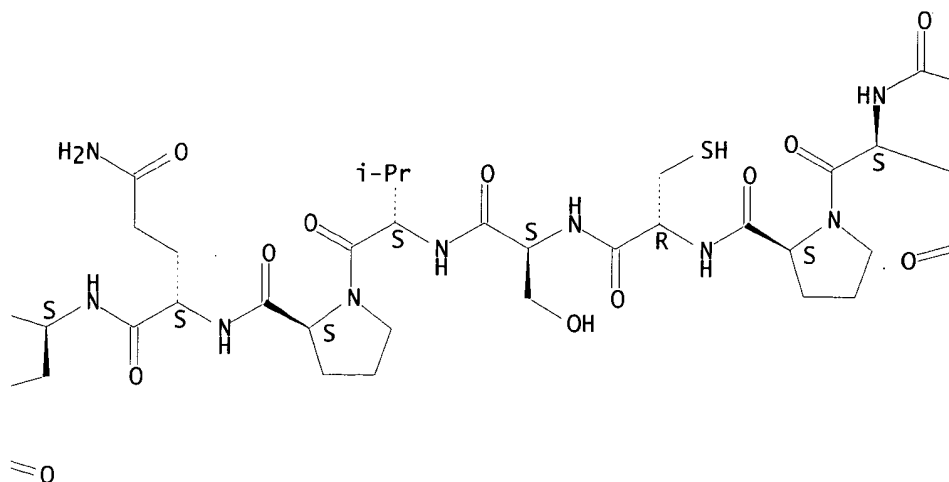RN   254972-99-1 HCAPLUS
CN   L-Valine, L-methionyl-L-arginyl-L-glutaminyl-L-leucyl-L-asparaginyl-L-
     prolyl-L-cysteinyl-L-seryl-L-valyl-L-prolyl-L-glutaminyl-L-glutaminyl-L-
     alanyl-L-seryl-L-cysteinyl-L-isoleucyl-L-tryptophyl-L-seryl-L-methionyl-
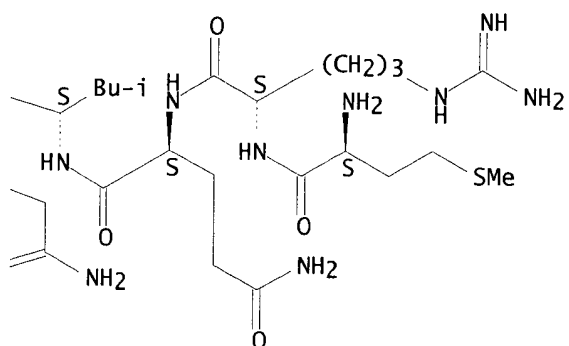   (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A
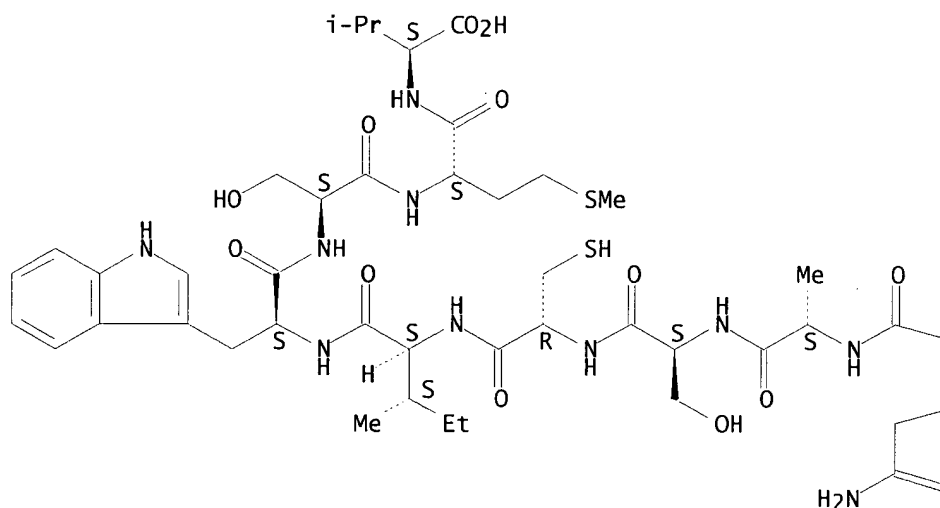
RN   255362-66-4 HCAPLUS
CN   Oleosin (synthetic consensus clone pGEM-OHBP fragment) (9CI) (CA INDEX
      NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-68-6 HCAPLUS
CN   Hordein C (barley clone ANG.DELTA.Cys7Cys236 fragment) (9CI) (CA INDEX
      NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-70-0 HCAPLUS
CN   Amylase, gluco- (Aspergillus niger clone pGEM-SBD isoenzyme 1 fragment)
      (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-72-2 HCAPLUS
CN   Glutenin CM16 (wheat fragment) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-73-3 HCAPLUS
CN   Glutenin CM17 (wheat fragment) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-74-4 HCAPLUS
CN   Puroindoline (wheat isoform A fragment) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT   **255362-64-2DP**, synthetic gene contg. **255362-65-3DP**,
     synthetic gene contg. **255362-67-5DP**, synthetic gene contg.
     255362-69-7DP, synthetic gene contg. **255362-71-1DP**,
     synthetic gene contg. **255362-75-5DP**, synthetic gene contg.
     RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified);
     PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)
        (nucleotide sequence; glutenin seed storage proteins modified to
        contain lipid or starch binding domains)
RN   255362-64-2 HCAPLUS
CN   DNA (barley clone pJANG.DELTA.Cys7Cys236 hordein C N-terminal fragment
     substitution deriv.-specifying) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-65-3 HCAPLUS
CN   DNA (synthetic consensus clone pGEM-OHBP oleosin fragment-specifying)
     (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-67-5 HCAPLUS
CN   DNA (barley clone ANG.DELTA.Cys7Cys236 hordein C fragment-specifying)
     (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-69-7 HCAPLUS
CN   DNA (Aspergillus niger clone pGEM-SBD glucoamylase isoenzyme 1
     fragment-specifying) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-71-1 HCAPLUS
CN   DNA (wheat glutenin CM16 fragment-specifying) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255362-75-5 HCAPLUS
CN   DNA (wheat puroindoline isoform A fragment-specifying) (9CI) (CA INDEX
     NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT   **9032-08-0**, Glucoamylase
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (starch-binding domain from; glutenin seed storage proteins modified to
        contain lipid or starch binding domains)
RN   9032-08-0 HCAPLUS
CN   Amylase, gluco- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT   **255363-63-4**, 1: PN: WO0002914 SEQID: 1 unclaimed DNA
     255363-64-5, 2: PN: WO0002914 SEQID: 2 unclaimed DNA
     255363-65-6, 3: PN: WO0002914 SEQID: 3 unclaimed DNA
     255363-66-7, 4: PN: WO0002914 SEQID: 4 unclaimed DNA
     255363-67-8, 5: PN: WO0002914 SEQID: 5 unclaimed DNA
     255363-68-9, 6: PN: WO0002914 SEQID: 6 unclaimed DNA

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    255363-69-0, 7: PN: WO0002914 SEQID: 7 unclaimed DNA
    255363-70-3, 8: PN: WO0002914 SEQID: 8 unclaimed DNA
    255363-71-4, 9: PN: WO0002914 SEQID: 9 unclaimed DNA
    255363-72-5 255363-73-6 255363-74-7
    255363-75-8
    RL: PRP (Properties)
       (unclaimed nucleotide sequence; glutenin seed storage proteins modified
       to contain lipid or starch binding domains)
RN   255363-63-4  HCAPLUS
CN   1: PN: WO0002914 SEQID: 1 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-64-5  HCAPLUS
CN   2: PN: WO0002914 SEQID: 2 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-65-6  HCAPLUS
CN   3: PN: WO0002914 SEQID: 3 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-66-7  HCAPLUS
CN   4: PN: WO0002914 SEQID: 4 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-67-8  HCAPLUS
CN   5: PN: WO0002914 SEQID: 5 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-68-9  HCAPLUS
CN   6: PN: WO0002914 SEQID: 6 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-69-0  HCAPLUS
CN   7: PN: WO0002914 SEQID: 7 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-70-3  HCAPLUS
CN   8: PN: WO0002914 SEQID: 8 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-71-4  HCAPLUS
CN   9: PN: WO0002914 SEQID: 9 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-72-5  HCAPLUS
CN   10: PN: WO0002914 SEQID: 10 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-73-6  HCAPLUS
CN   11: PN: WO0002914 SEQID: 11 unclaimed DNA (9CI)  (CA INDEX NAME)

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RN   255363-74-7  HCAPLUS
CN   12: PN: WO0002914 SEQID: 12 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN   255363-75-8  HCAPLUS
CN   13: PN: WO0002914 SEQID: 13 unclaimed DNA (9CI)  (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
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IC   ICM C07K014-38
      ICS A21D002-38; A23L001-10
CC   3-2 (Biochemical Genetics)
      Section cross-reference(s): 6, 17, 48
ST   storage protein modification lipid starch binding domain; glutenin
      modification lipid starch binding domain; hordein modification lipid
      starch binding domain; sequence hordein modification gene lipid starch
      binding
IT   Hordeins
      RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
      use, unclassified); PRP (Properties); BIOL (Biological study); PREP
      (Preparation); USES (Uses)
         (C; glutenin seed storage proteins modified to contain lipid or starch
         binding domains).
IT   **Glutenins**
      RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (CM16, lipid-binding domain from; glutenin seed storage proteins
         modified to contain lipid or starch binding domains)
IT   **Glutenins**
      RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (CM17, lipid-binding domain from; glutenin seed storage proteins
         modified to contain lipid or starch binding domains)
IT   Bakery products
         (cakes; glutenin seed storage proteins modified to contain lipid or
         starch binding domains)
IT   Proteins, specific or class
      RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
      use, unclassified); PRP (Properties); BIOL (Biological study); PREP
      (Preparation); USES (Uses)
         (chloroform/methanol-sol.; glutenin seed storage proteins modified to
         contain lipid or starch binding domains)
IT   Proteins, specific or class
      RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
      use, unclassified); PRP (Properties); BIOL (Biological study); PREP
      (Preparation); USES (Uses)
         (friabins; glutenin seed storage proteins modified to contain lipid or
         starch binding domains)
IT   Adhesives
      Bread
      Breakfast cereal
      Coating materials
      Construction materials
      DNA sequences
      Films
      Food
      Packaging materials
      Pasta
      Protein engineering
      Protein sequences
         (glutenin seed storage proteins modified to contain lipid or starch
         binding domains)
IT   Synthetic gene
      RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified);
      PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)
         (glutenin seed storage proteins modified to contain lipid or starch
         binding domains)
IT   Gliadins
      Glutenins
      RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
      use, unclassified); PRP (Properties); BIOL (Biological study); PREP

(Preparation); USES (Uses)
 (glutenin seed storage proteins **modified** to contain lipid or
 starch binding domains)
IT Proteins, specific or class
 RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
 use, unclassified); PRP (Properties); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
  (grain-softness; glutenin seed storage proteins modified to contain
  lipid or starch binding domains)
IT **Glutenins**
 RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
 use, unclassified); PRP (Properties); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
  (high-mol.-wt.; glutenin seed storage proteins **modified** to
  contain lipid or starch binding domains)
IT **Glutenins**
 RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
 use, unclassified); PRP (Properties); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
  (low-mol.-wt.; glutenin seed storage proteins **modified** to
  contain lipid or starch binding domains)
IT Proteins, specific or class
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
  (oleosins, hydrophobic binding domain from; glutenin seed storage
  proteins modified to contain lipid or starch binding domains)
IT Bakery products
  (pastries; glutenin seed storage proteins modified to contain lipid or
  starch binding domains)
IT Proteins, specific or class
 RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
 use, unclassified); PRP (Properties); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
  (puroindolines; glutenin seed storage proteins modified to contain
  lipid or starch binding domains)
IT Food
  (snack; glutenin seed storage proteins modified to contain lipid or
  starch binding domains)
IT Proteins, specific or class
 RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
 use, unclassified); PRP (Properties); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
  (storage; glutenin seed storage proteins modified to contain lipid or
  starch binding domains)
IT Animal cell
 Bacteria (Eubacteria)
 Escherichia coli
 Pichia
 Plant cell
 Saccharomyces cerevisiae
 Wheat
 Yeast
  (transgenic expression system; glutenin seed storage proteins modified
  to contain lipid or starch binding domains)
IT **254972-99-1DP, modified protein** contg.
 255362-66-4DP, modified protein contg.
 255362-68-6DP, modified protein contg.
 255362-70-0DP, modified protein contg.
 255362-72-2DP, Glutenin CM16 (wheat fragment)**, modified
 protein** contg. **255362-73-3DP,** Glutenin CM17 (wheat
 fragment)**, modified protein** contg.

255362-74-4DP, Puroindoline (wheat isoform A fragment),
modified protein contg.
RL: BPN (Biosynthetic preparation); FFD (Food or feed use); NUU (Other
use, unclassified); PRP (Properties); BIOL (Biological study); PREP
(Preparation); USES (Uses)
    (amino acid sequence; glutenin seed storage proteins modified to
    contain lipid or starch binding domains)

IT   **255362-64-2DP**, synthetic gene contg. **255362-65-3DP**,
synthetic gene contg. **255362-67-5DP**, synthetic gene contg.
255362-69-7DP, synthetic gene contg. **255362-71-1DP**,
synthetic gene contg. **255362-75-5DP**, synthetic gene contg.
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified);
PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)
    (nucleotide sequence; glutenin seed storage proteins modified to
    contain lipid or starch binding domains)

IT   **9032-08-0**, Glucoamylase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
    (starch-binding domain from; glutenin seed storage proteins modified to
    contain lipid or starch binding domains)

IT   **255363-63-4**, 1: PN: WO0002914 SEQID: 1 unclaimed DNA
255363-64-5, 2: PN: WO0002914 SEQID: 2 unclaimed DNA
255363-65-6, 3: PN: WO0002914 SEQID: 3 unclaimed DNA
255363-66-7, 4: PN: WO0002914 SEQID: 4 unclaimed DNA
255363-67-8, 5: PN: WO0002914 SEQID: 5 unclaimed DNA
255363-68-9, 6: PN: WO0002914 SEQID: 6 unclaimed DNA
255363-69-0, 7: PN: WO0002914 SEQID: 7 unclaimed DNA
255363-70-3, 8: PN: WO0002914 SEQID: 8 unclaimed DNA
255363-71-4, 9: PN: WO0002914 SEQID: 9 unclaimed DNA
255363-72-5 255363-73-6 255363-74-7
255363-75-8
RL: PRP (Properties)
    (unclaimed nucleotide sequence; glutenin seed storage proteins modified
    to contain lipid or starch binding domains)

REFERENCE COUNT: 5   THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
                                 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT